

FIG. 1

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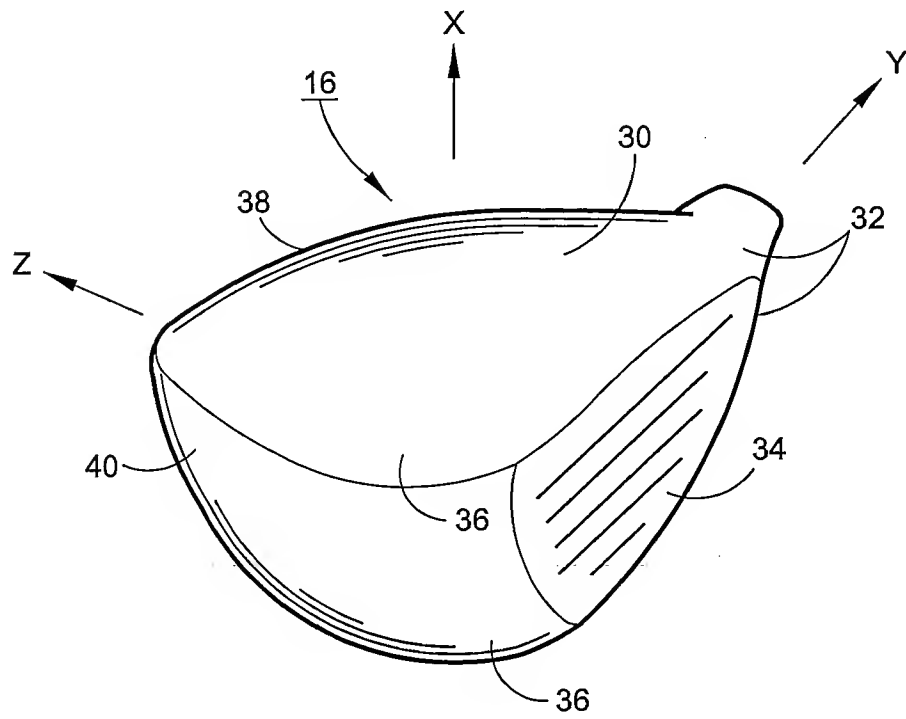


FIG. 2

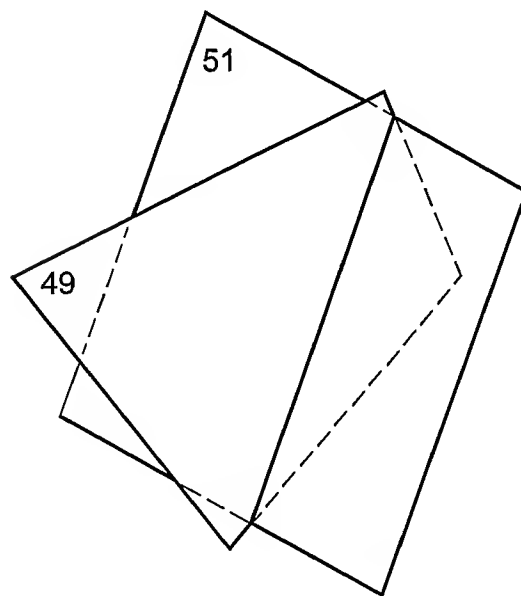


FIG. 2A

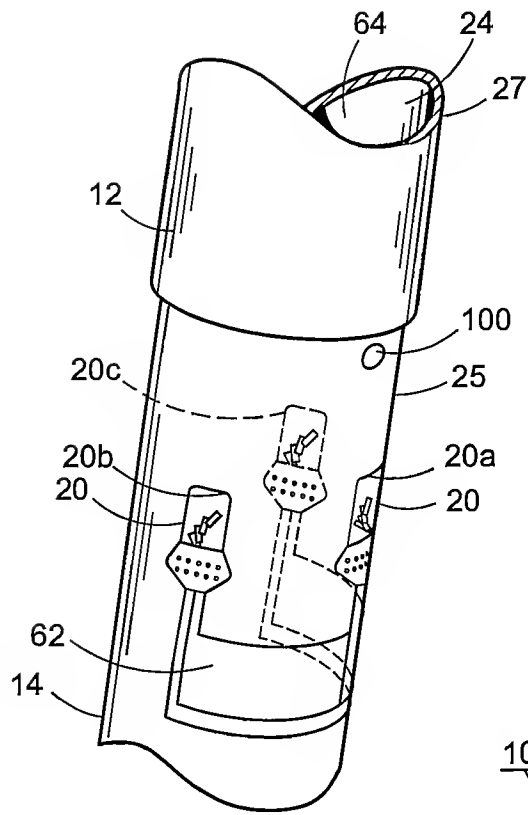


FIG. 4

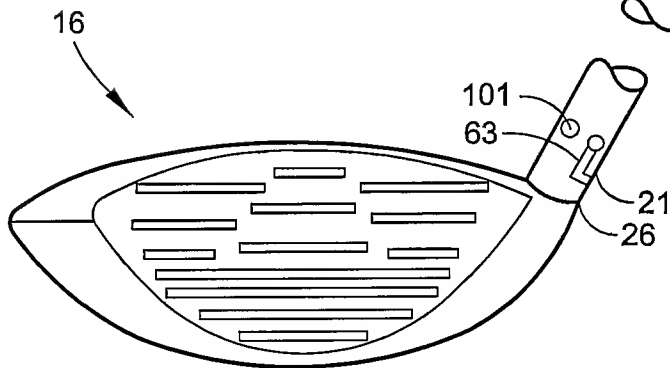
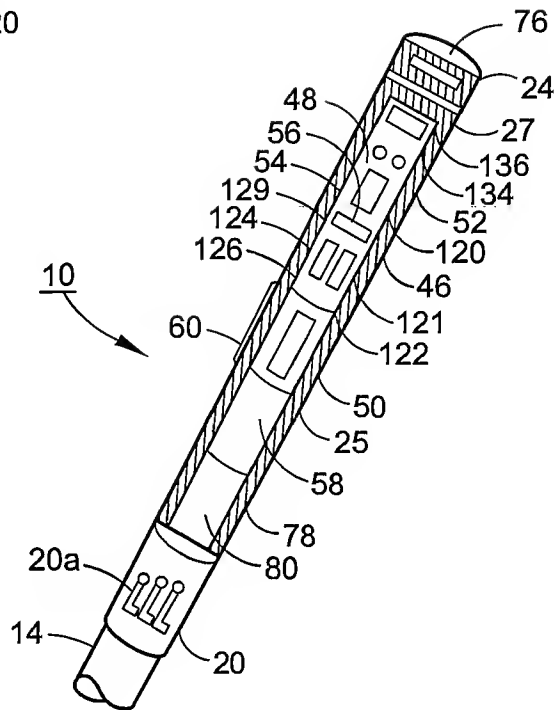


FIG. 3

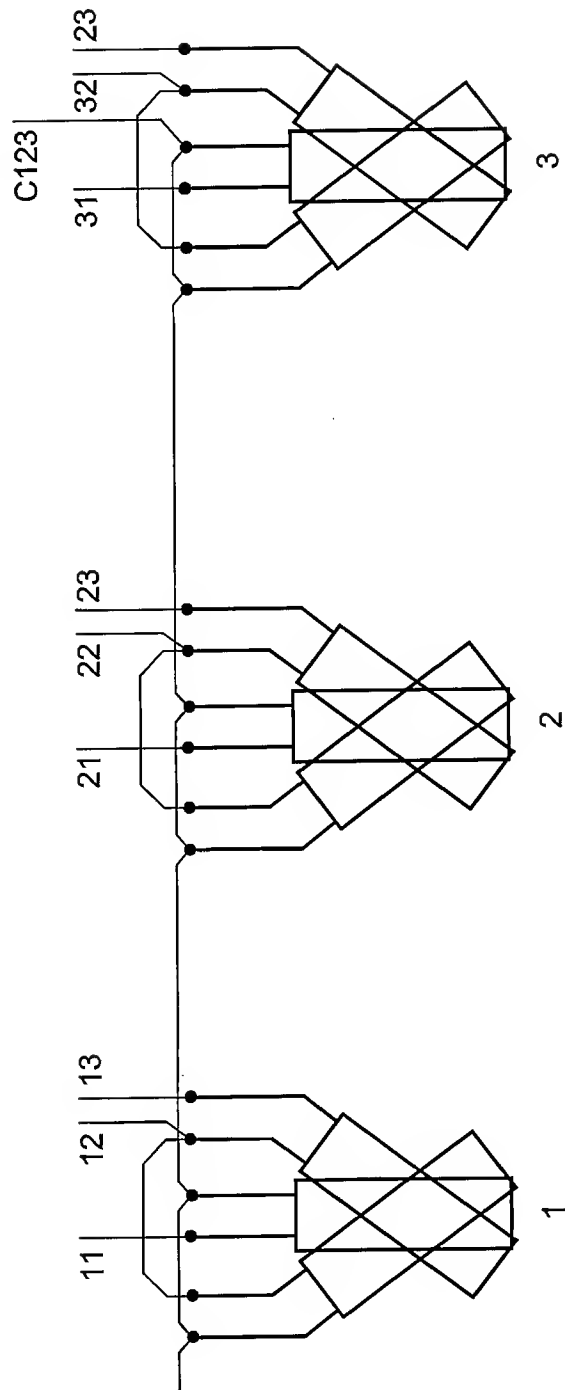


FIG. 5

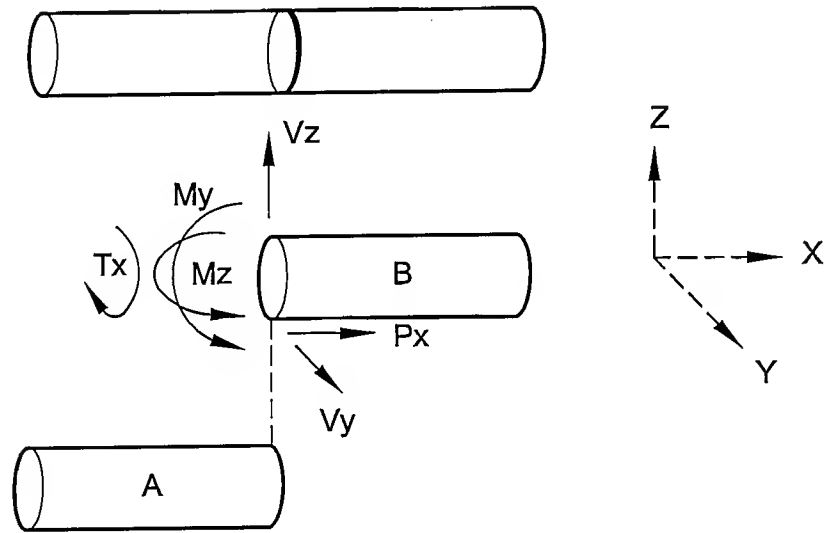


FIG. 6

$$\begin{bmatrix} P_x \\ V_y \\ V_z \\ M_y \\ M_z \\ T_x \end{bmatrix} = \begin{bmatrix} EA/3 & EA/3 & EA/3 & 0 & 0 & 0 \\ 0 & 0 & 0 & KAG/\sqrt{3} & -KAG/\sqrt{3} & 0 \\ 0 & 0 & 0 & -KAG3 & -KAG3 & 2*KAG/3 \\ EI/(Ro*\sqrt{3}) & EI/(Ro*\sqrt{3}) & 0 & 0 & 0 & 0 \\ -EI/Ro & -EI/Ro & -2*EI/Ro & 0 & 0 & 0 \\ 0 & 0 & 0 & GJ(3*Ro) & GJ(3*Ro) & GJ(3*Ro) \end{bmatrix} \times \begin{bmatrix} e1 \\ e2 \\ e3 \\ g1 \\ g2 \\ g3 \end{bmatrix}$$

FIG. 7

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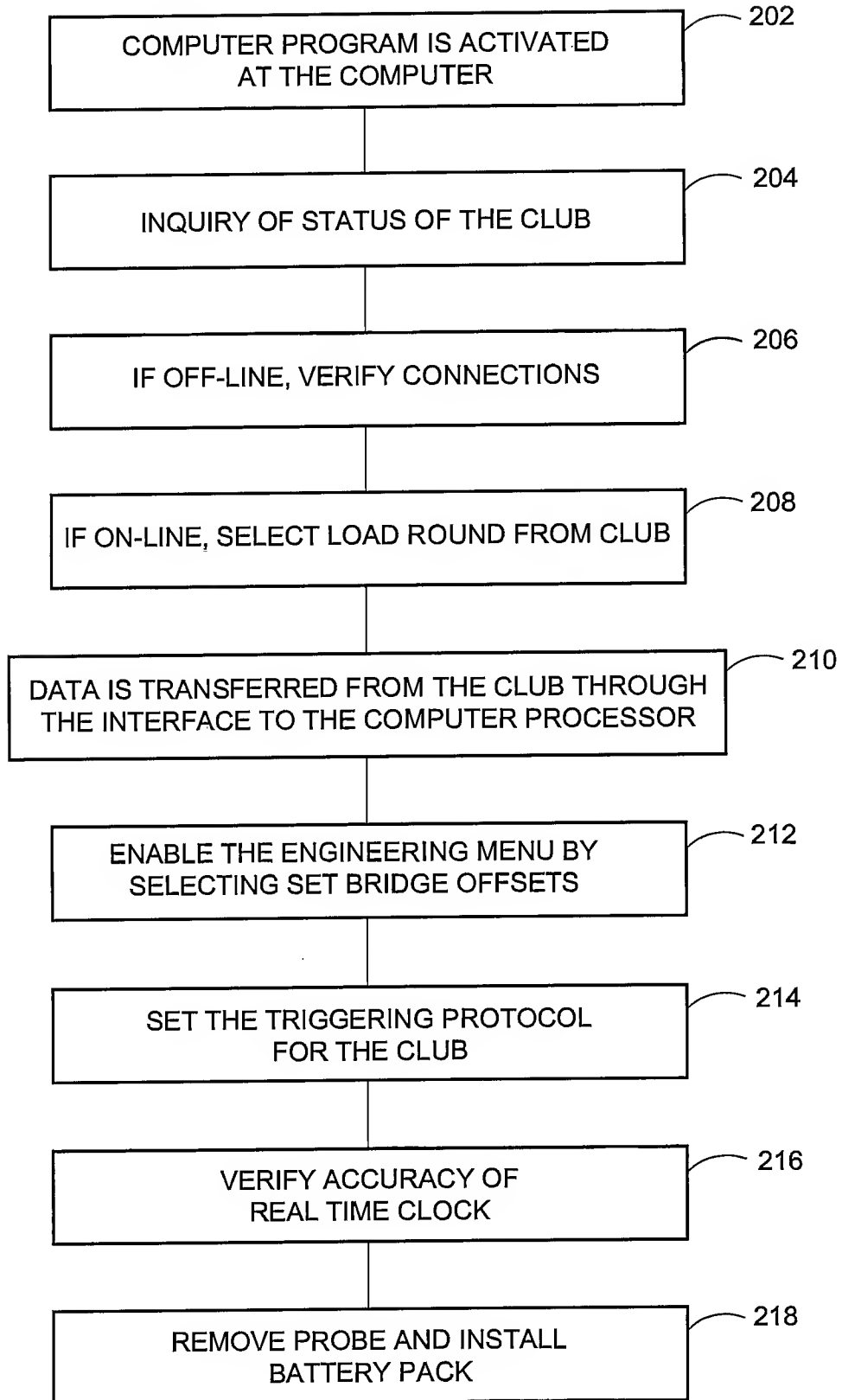


FIG. 8a

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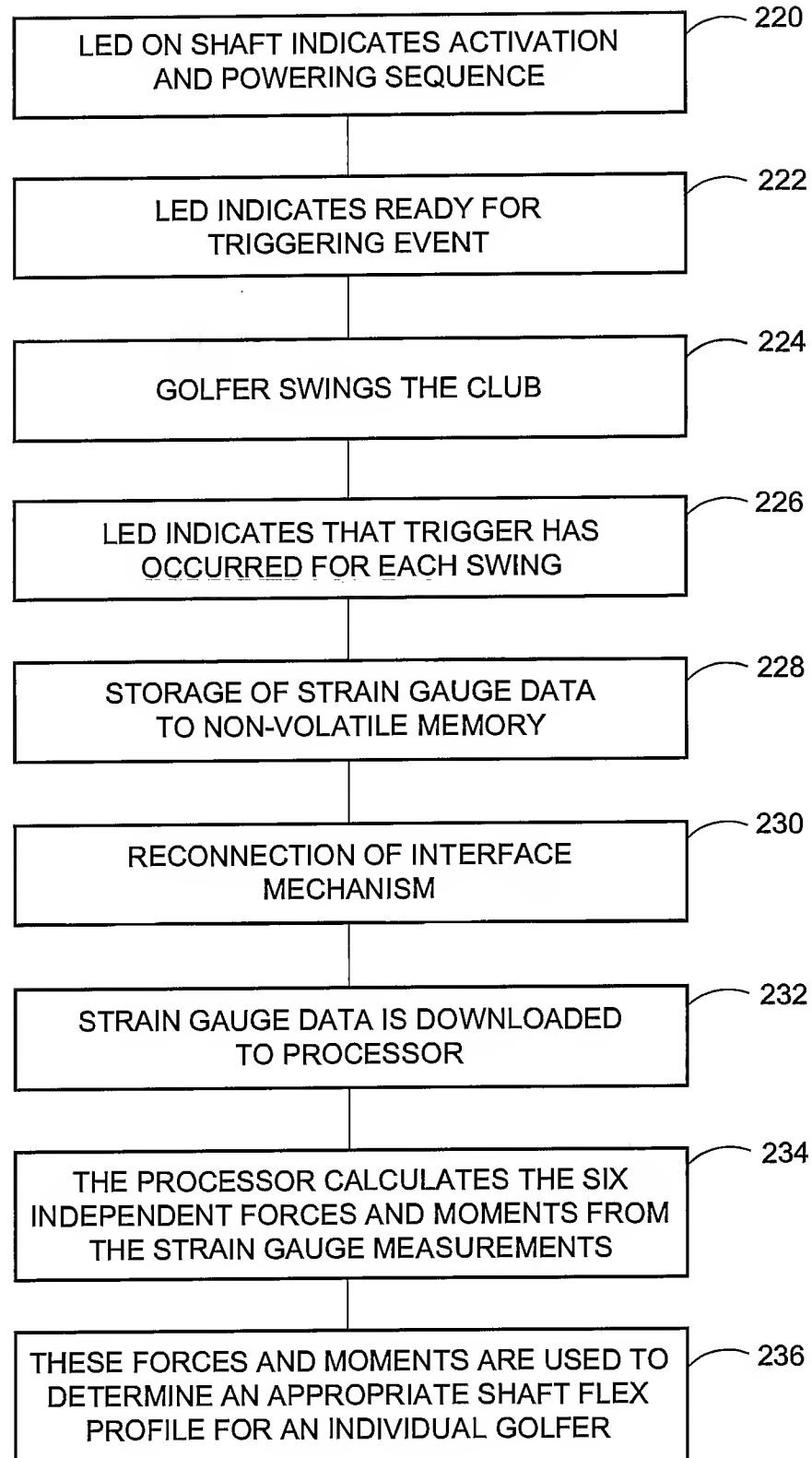


FIG. 8b

CALLAWAY GOLF COMPANY
OBD II EXPORTED DATA FILE
CLUB ID

8 DEGREE HAWK EYE DRIVER
WITH L STRONG SHAFT
OBD 11 # 7
SAMPLE RATE = 100/S/CH.

Diagram illustrating the experimental setup for the navigation task. The setup includes a **TARGET DIRECTION** (indicated by a horizontal arrow), a **Z** axis (indicated by a vertical line), and a circular path defined by a dashed line. Three rosettes are positioned along the circular path, labeled **ROSETTE 1**, **ROSETTE 2**, and **ROSETTE 3**. A **Y** axis is also indicated. The **TIP** is located at the center of the circular path. The parameters for the rosettes are listed below:

Parameter	Value
EA:	887000
EI:	9510
GJ:	2630
KAG:	65300
Ro:	0.175

EA:	887000
EI:	9510
GJ:	2630
AG:	65300
Ro:	0.175

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F/G

TIME	BUTT e1		BUTT e2		BUTT e3		BUTT g1		BUTT g2		BUTT g3		TIP e1		TIP e2		TIP e3		TIP g1		TIP g2		TIP g3		STRESS RESULTANTS AT BUTT						STRESS RESULTANTS AT TIP																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	s=0	c=1	s=0	c=2	s=0	c=3	s=0	c=4	s=0	c=5	s=0	c=6	s=0	c=7	s=0	c=8	s=0	c=9	s=0	c=10	s=0	c=11	s=0	c=12	I	Vz	Mx	Px	Tx	I	Vz	Mx	Px	Tx	I	Vz	Mx	Px	Tx																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
0.00201	49.923	-117.47	18.749	-23.924	-16.503	-21.824	16.503	-21.824	11.172	-21.783	-27.952	-30.643	-1.807116	-1.99808	-0.75366	-0.509224	-35.4266	-0.28181	11.20548	-0.30381	-0.33981	-1.22087	1.35549	-0.40368																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

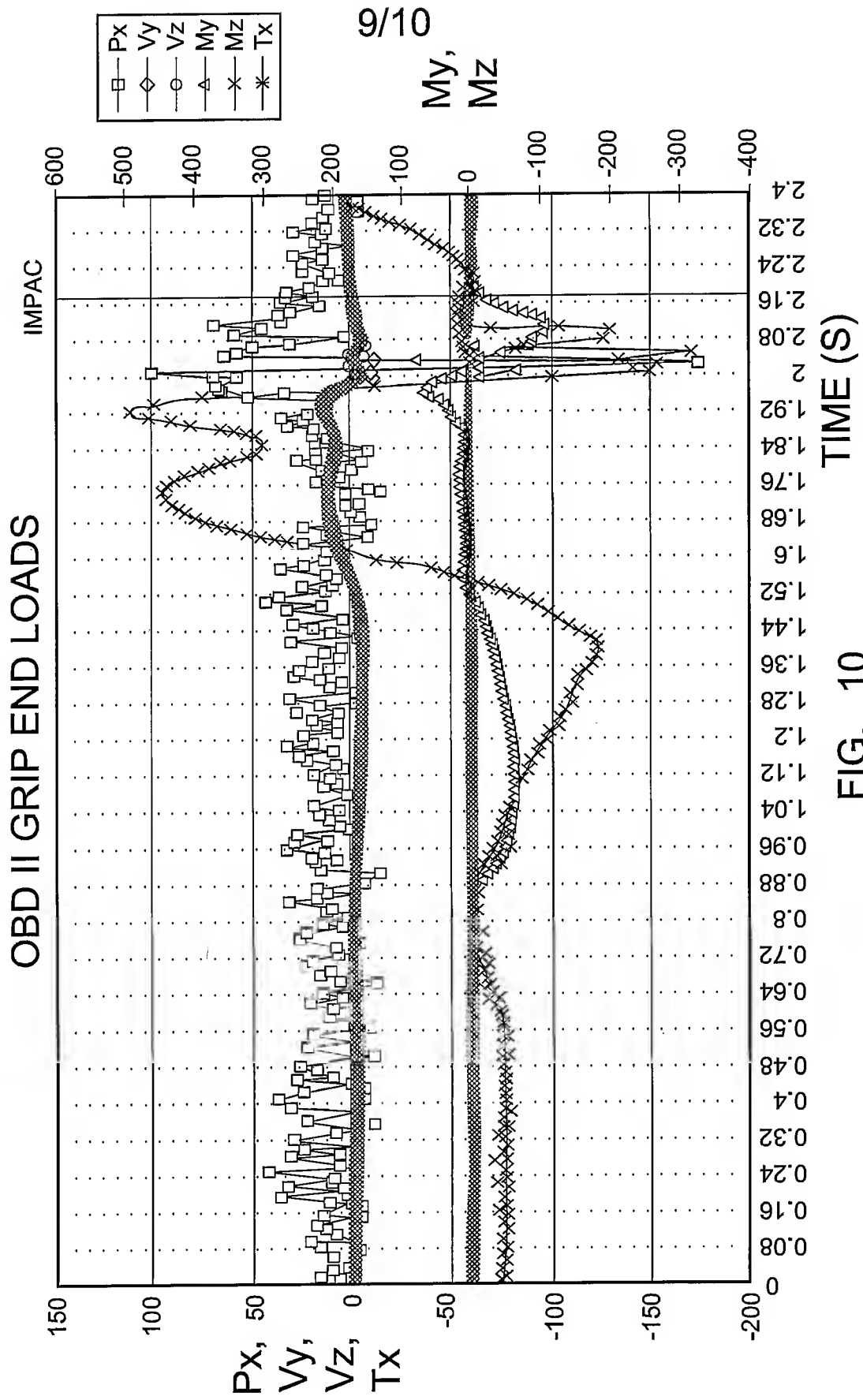


FIG. 10

